DEPARTMENTAL INTERVIEWS

MECHANICAL ENGINEERING

EACH engineering student must decide, by the end of his freshman year, just which branch of engineering he will follow. This decision is not always an easy one to make. The field covered by mechanical engineering is very broad. Among other things it includes the design, construction, operation and maintenance of all types of machinery. The production, transmission, application, and consumption of power is also an important phase of this branch of engineering. Some of the things in which mechanical engineering is involved to a major extent are heating and ventilating, including air conditioning; refrigeration; steam power plants, including steam turbines, steam boilers, and much auxiliary equipment; internal combustion engines, including aeronautical and diesel engines; hydraulic turbines; and automobiles. A mechanical engineer, to be successful, must be a hard worker and a clear thinker. Freshmen who are looking for a quick and easy road to success should not select mechanical engineering. FRANKLIN W. MARQUIS.

MINE ENGINEERING

WE the instructional staff in mine engineering, pleasurably anticipate meeting and working with you who will register as sophomores in mining or petroleum engineering next September.

You have before you three years of hard work. If you have a real intense interest in your chosen profession, then your work will be enjoyable. We hope that your coming contacts with faculty members and industry will stimulate such interest in you.

It is a real pleasure to report satisfactory employment conditions in both the mining and petroleum engineering fields. Industry demands high-class men who are not only good students but who also have the capacity, physique, and personality to become chief engineers, superintendents, managers, and research men. Mediocre men receive and generally continue to hold second-rate jobs.

Professors Nold and O'Rourke invite you to visit them in their offices in Lord Hall.

HARRY E. NOLD.

ENGINEERING PHYSICS

IT IS generally recognized that the different forms of engineering have emanated from physics and chemistry. It is less frequently recognized that industrial physics is a profession in the same sense that engineering is a profession. The increasing technical nature of industry, arising largely out of recent advances in physics and chemistry, is requiring engineers and manufacturers to turn to physicists for more fundamental knowledge of physical phenomena.

The industrial laboratories desire to find the answers to questions which present themselves. The curriculum in engineering physics is designed to meet this need. In it the emphasis is on physics, chemistry, and mathematics, with sufficient training in mechanical and electrical engineering to insure ability to apply physics to engineering problems. A sound basis is thus laid for scientific growth and development. Such a broad and fundamental training can not be secured in a four-year undergraduate curriculum. Consequently it should be strengthened and amplified by one or more years of additional study.

ALPHEUS W. SMITH.

METALLURGICAL ENGINEERING

THE department of metallurgy, till about 1922 was primarily a so-called service department. About this time the importance and magnitude of the metallurgical industries of Ohio became evident with the result that a curriculum in metallurgical engineering was offered. The early graduates of this curriculum are some of the best known metallurgical engineers and metallurgists in the country and scarcely a steel plant in the state now is operating without the guidance of an Ohio State graduate. The result of this has been that during the depression, the department has been able to find employment for its men, and during the last few years has not been able to supply the demand for graduates.

It is unfortunate that enrollment in this curriculum will have to be limited in some manner now, because of insufficient space and equipment facilities. It is hoped that in the near future this condition will be remedied so that the demands of this important industry can be met.

DANA J. DEMOREST.

CIVIL ENGINEERING

THE calls for civils—which last year employed all graduates and also all undergraduates in the department—are of surprising variety as shown by letters on file in Brown Hall.

These calls represent only a part of the demand, because the immense public works are represented by circulars of examinations to be held. Great conservancy projects, flood control, hydro-electric and others, call for more civil engineers than any others in national, state, and local governments. Especially attractive is the corps of engineers of the Army, and the corps of civil engineers in the Navy.

Contracting, construction of all kinds, sales engineering, insurance engineering, sanitary, highway, geodetic, topographic, and railroad engineering are some of the fields employing civils. Graduates of the department have been very successful in all.

Although a broad foundation is laid for the foregoing specialties, the department aims to rapidly qualify its students for practical usefulness, and does this by summer camps or contracts exceeding in scope that attempted at any other university.

CHRISTOPHER E. SHERMAN.

ARCHITECURE

AT the close of his academic year of 1936-37, many freshmen in the engineering college have yet the problem of determining the particular curriculum which they will elect to follow as sophomores. Several factors must be considered in choosing a life work and too often question of probable financial reward is the determining factor. Nothing is more productive of unhappiness than working, day after day, at a job one does not like. If then you find joy in creative work, if you desire to be of the greatest possible service to society, and if, in a word, your interest is in architecture, do not let any other factor determine your choice.

For those not gifted with an artistic sense, there is the great field of construction for which particular options in architectural engineering are offered. Many of our graduates have gone into the field of contracting. For those of artistic inclination, it is well to recall the definition of architecture as the most useful of the fine arts and the finest of the useful arts.

The department of architecture extends greetings to you who are about to become sophomores and asks your consideration, in choosing a life work, of a great creative profession—that of architecture.

CHARLES ST. JOHN CHUBB.

CHEMICAL ENGINEERING

CHEMICAL ENGINEERING is that branch of engineering which utilizes engineering principles, methods, design, operations, and equipment in chemical processes or wherever chemistry is used or is of assistance in manufacturing. The work of the chemical engineer is concerned with the coordination and harnessing of phenomena and science for production and service, going into ultimate detail, if and when necessary, to guarantee production and performance.

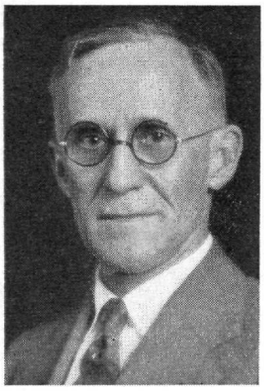
The industries employing chemical engineers cover a widely diversified field: paint, varnishes, resins, rayon, petroleum, alkalies, chemicals, dyes, paper, rubber, lime, soap, by-product coke, coated fabrics, textiles, sugar, plastics, and many others.

The chemical engineer's work is based upon a thorough knowledge of the chemical engineering operations as heat transfer, distillation, evaporation, drying, etc., as carried out on a manufacturing scale; mathematics; physics; economics; mechanics; drawing; and all the branches of chemistry.

Chemical engineers saw practically little of the depression and no Ohio State University graduate is unemployed—and all our last year's chemical engineering graduates had positions before Commencement—Bachelors, Masters, and Ph. D's.

JAMES R. WITHROW.

CERAMIC ENGINEERING



THIS ceramic engineering department is the oldest school of its kind in the world and its graduates are distributed over practically the whole world.

The education is based on physics, chemistry, and mathematics which are applied to the solution of problems connected with the production of all products made from non-metallic minerals other than coal and oil. The course equips the graduate to follow research and development, production, sales engineering, or administration in a field which includes structural clay products, refractories, pottery, tableware, wall and floor tile, glass, vitreous enamels for metals and many special products. It also includes service in the production of the raw materials and in equipment production.

The rapid development of this phase of engineering in the past ten years has created an unusual demand for trained men. Many hundreds of ceramic plants in the United States have no technically trained engineers due to the shortage of men with suitable training.

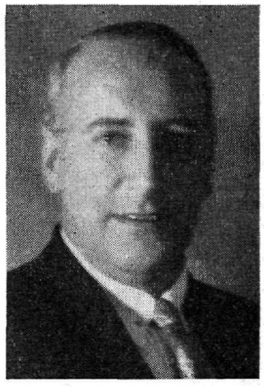
ARTHUR S. WATTS.

ELECTRICAL ENGINEERING

JOINING with the chairmen of the other departments, it is a pleasure for me to speak for the department of electrical engineering in welcoming the freshmen into the professional curricula. Beginning with the sophomore year in general, the various curricula take on a more professional tone and students begin to feel that they are really studying the thing they came to college to undertake. We are glad to welcome the electrical engineering students, particularly at this stage of entrance into their chosen field. We, in the department, are constantly trying to maintain an educational standard of which both faculty and students can be proud. It occurs from time to time that students as well as faculty have discouragements, but in the end it usually works out that a combined striving for higher excellence on the part of the faculty and students reaps a rich reward of satisfaction.

ERWIN E. DREESE.

INDUSTRIAL ENGINEERING



INDUSTRIAL ENGINEERING offers to young freshmen engineers a chance to enter the practical side of engineering. If you like making things—manufacturing; if you like handling men; if you like the thought of managing a company; or, finally, if you like the thought of going into business for yourselves—industrial engineering can help you.

We deal with the machine tools of production, with the cost of production and with the handling of men. Time study and motion study are essential parts of our curriculum.

There would seem to be a shortage of skilled industrial engineers, and our graduates are all placed in responsible engineering positions. There is good demand for our undergraduates and there is every promise this demand will continue.

JOHN YOUNGER.